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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/799,474	03/11/2004	Ke Han	MP0416	8376

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FISH & RICHARDSON P.C.  
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MINNEAPOLIS, MN 55440-1022

EXAMINER
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WONG, KIN C

ART UNIT	PAPER NUMBER
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2627

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	03/15/2007	PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/799,474	<b>Applicant(s)</b> HAN ET AL.	
	<b>Examiner</b> K. Wong	<b>Art Unit</b> 2627	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 01 March 2007.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-56 is/are pending in the application.
- 4a) Of the above claim(s) 49-56 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-48 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Election/Restrictions***

Applicant's election without traverse of claims (1-48) in the reply filed on 3/1/07 is acknowledged. Claims (49-56) are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected claims, there being no allowable generic or linking claim. Election was made **without** traverse in the reply filed on 3/1/07. The nonelected claims are required to be cancelled in the next response.

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims (1-48) are rejected under 35 U.S.C. 102(e) as being anticipated by Moran et al (6738205).

Regarding claims 1, 17, 29 and 42: Moran et al discloses a system (as depicted in figure 2B of Moran et al and see associated descriptions for details) including:

means for writing a spiral servo (col. 2, lines 49-67 of Moran et al) reference track on a machine-readable medium (element 18 in figure 2B); and

means for generating a servo track with servo information based on timing information obtained from the spiral servo reference track on the machine-readable medium (col. 7, lines 3-24 of Moran et al).

Regarding claim 43: Moran et al teaches that wherein the means for generating the servo track includes: means for decoding the encoded repeating pattern using multiple framings of signal samples of a signal from the machine-readable medium; means for correlating the signal samples that indicate pattern transitions, for the multiple framings, with valid pattern transitions as defined by the encoding; means for accumulating the transition pattern correlations for multiple framings; selecting one of the multiple framings as a correct framing for decoding based on the accumulated correlations; and means for determining a waveform polarity for the signal based on the repeating pattern and the selected correct framing (col. 13, lines 29-55 of Moran et al).

Regarding claim 44: Moran et al teaches that wherein the means for decoding includes a Viterbi means for detecting the encoded repeating pattern, using a correlation metric, with the multiple framings (col. 7, lines 30-34 of Moran et al).

Regarding claim 45: Moran et al teaches that wherein the encoded repeating pattern includes a  $1/N$  rate coding of a repeating pattern of multiple filler symbols followed by a timing-reference symbol, resulting in a channel bit rate of  $N$  relative to a symbol rate, and the means for decoding includes means for using  $N$  different framings of the signal samples (col. 7, line 63 to col. Col. 18, line 13 and col. 20, lines 39-54 of Moran et al).

Regarding claim 46: Moran et al teaches that wherein the means for correlating the signal samples that indicate pattern transitions includes means for correlating the signal samples that indicate transitions from a filler symbol to a timing-reference symbol with expected signal samples for transitions from the filler symbol to the timing-reference symbol, and correlating the signal samples that indicated transitions from the timing-reference symbol to the filler symbol with expected signal samples for transitions from the timing-reference symbol to the filler symbol (col. 21, lines 12-28 of Moran et al).

Regarding claim 47: Moran et al teaches that wherein the means for selecting one of the multiple framings as a correct framing includes programmable means for selecting one of the multiple framings (col. 24, line 60 to col. 25, line 59 where Moran et al describes the means for programming the selection of the framings in a multiple frames).

Regarding claim 48: Moran et al teaches that wherein the means for determining the waveform polarity includes: means for determining a signal-indicated framing based on a generally sinusoidal portion of the signal; and means for identifying a reversed polarity if the signal-indicated framing is different than the correct framing selected based on the accumulated correlations (col. 23, lines 27-62 of Moran et al).

Regarding claims 2-16: the method claims (2-16) are met when the apparatus of Moran et al is in use.

Regarding claims 17-28: claims (17-28) have limitations similar to those treated in the above rejection(s), and are met by the references as discussed above. Claim 17

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however also recites the following limitations of servo writer that which is discussed in claim 42 and col. 2, lines 49-67 of Moran et al.

Regarding claim 29-41: claims (29-41) have limitations similar to those treated in the above rejection(s), and are met by the references as discussed above. Claim 29 however also recites the following limitations of servo writer that which is discussed in claim 42 and col. 2, lines 49-67 of Moran et al.

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Kanota et al (5089917) and Kiriaki (61669429) are cited for signal processing. Cloke (6977789) and Swearingen et al (5668679) are cited for spiral servo writing.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to K. Wong whose telephone number is (571) 272-7566.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, H. Nguyen can be reached on (571) 272-7579. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a

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USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

kw

14 Mar 07



**K. WONG**  
**PRIMARY EXAMINER**